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AUTHOR	Stricker, Lawrence J.
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ABSTRACT

This study investigated the overall prevalence of discrepant Law School Admission Test (LSAT) subscores, their differential incidence for subgroups of examinees, and the psychometric properties of alternative measures of discrepant performance. The sample consisted of 39,350 examinees who took the LSAT in December 1991. Subscore differences, often very substantial, were frequent. Statistically significant differences affected about a third of examinees, and significant and rare differences involved a tenth of test takers. The incidence of these discrepancies did not vary with the examinees' sex, ethnicity, familiarity with the LSAT, or the number or selectivity of the law schools to which examinees were applying. The prevalence was greater for examinees who had high total scores on the LSAT or were older, primarily reflecting these test takers' deviantly poor performance on the Analytical Reasoning subtest. Reliability was appreciable for two of the three measures or observed differences, but minimal for the more important measures of significant or significant and rare differences. Subscore discrepancies appear to have no viable role to play in interpreting examinee's LSAT performance. (Contains 3 figures, 10 tables, and 29 references.) (SLD)

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Discrepant LSAT Subscores

Lawrence J. Stricker

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Abstract

This study investigated the overall prevalence of discrepant LSAT subscores, their differential incidence for subgroups of examinees, and the psychometric properties of alternative measures of discrepant performance. Subscore differences, often very substantial ones, were frequent; statistically significant differences affected about a third of examinees; and significant and rare differences involved a tenth of test takers. The incidence of these discrepancies did not vary with the examinees' sex, ethnicity, familiarity with the LSAT, or the number or selectivity of the law schools to which the examinees were applying. But the prevalence was greater for examinees who had high total scores on the LSAT or were older, primarily reflecting these test-takers' deviantly poor performance on the Analytical Reasoning subtest. Reliability was appreciable for two of the three measures of observed differences but minimal for the more important measures of significant or significant and rare differences. Subscore discrepancies appear to have no viable role to play in interpreting examinees' LSAT performance.

Unlike other tests employed in graduate admissions, the Law School Admission Test (LSAT) reports only a total score. In contrast, the Graduate Record Examination General Test (Conrad, Trisman, & Miller, 1977) provides Verbal, Quantitative, and Analytical scores (and no total score), and the Graduate Management Admission Test (Hecht & Schrader, 1986) gives Verbal and Quantitative scores as well as a total score.

A recent LSAS survey suggested that there was growing interest in the law school community about the potential usefulness of the LSAT subscores (Analytical Reasoning, Reading Comprehension, and Logical Reasoning) in admissions, especially for minority applicants, supplementing what is yielded by the test's total score. One approach to this issue is to identify examinees with markedly different performance on the test's subscores. Previous research has studied examinees' discrepancies between their LSAT performance and their college record, as reflected in large differences between LSAT scores and undergraduate GPAs, in an effort to determine the implications of these differences for the validity of the test and college record in predicting law school grades (Boldt, 1966, 1968). Similarly, examinees may exhibit discrepant performance on the various sections of the LSAT, with large differences in their subscores. These discrepancies may shed light on the examinees' overall test performance, useful in interpreting the LSAT total score and in making admissions decisions about these applicants. For instance, discrepant performance could reflect language difficulties or atypical education.

"Profile" or "scatter" analysis of discrepancies in the subtest scores on individually-administered intelligence tests, notably the Weschler Adult Intelligence Scale—Revised (WAIS-R; Wechsler, 1981), Wechsler Intelligence Scale for Children—Revised (WISC-R; Wechsler, 1974), and Stanford-Binet Intelligence Scale: Fourth Edition (Thorndike, Hagen, & Sattler, 1986), have long been employed in interpreting performance on these tests (e.g., Frank, 1983; Kaufman, 1979, 1990; Matarazzo, 1972; Sattler, 1988). For instance, differences between the Verbal and Performance IQs on the WAIS-R or WISC-R are examined. Subtest scores on these tests are also compared, such as the difference between the highest and lowest scores for the entire set of subtests, as well as the difference between scores for each pair of subtests.

Accordingly, the purpose of this study was to provide basic information on discrepant test performance on the LSAT: the overall prevalence of discrepant performance as well as its differential incidence for relevant subgroups of examinees, and the psychometric properties of alternative measures of this characteristic.

Method

Sample and Test Form

The sample consisted of the 39,530 examinees who took the LSAT (Form 2LSS13) at the December 1991 administration, had no test irregularities, had no handicap flag, and had not applied to all 15 Canadian law schools. This test administration was chosen because it used the current version of the test, it was large, and it had a substantial proportion of minority examinees. For the sample, 55.1% were male, 72.4% were Caucasian, the mean age was 26.4 years (SD = 6.51), and the mean LSAT score was 149.9 (SD = 9.2).

Variables

Discrepant subscores. A combined score was obtained for the two separately-timed Logical Reasoning sections. The raw scores for this combined subtest and for each of the two other subtests were converted to standard scores. Corresponding standard scores for the halves of each subtest were also obtained. The halves were matched in content and psychometric characteristics. The content characteristics were the major categories used in test development. Analytical Reasoning categories are Ordering, Grouping and Set Membership, and Mixed/Other. Reading Comprehension categories are Science and Technology, Humanities, Social Science, and Law. And Logical Reasoning categories are Conclusions; Techniques, Structures, Patterns, or Principles; Argument Flaws and Reasoning Errors; and Additional Evidence. The psychometric characteristics were the delta indexes of item difficulty and biserial correlations of item discrimination, from the routine test analysis for a subsample of the examinees.

Three kinds of discrepancy scores, adapted from those employed with intelligence tests (e.g., Kaufman, 1990; Sattler, 1988), were obtained for each pair of subscores:

1. An observed difference: The actual difference between a pair of subscores, retaining the direction of the difference.

2. A significant difference: An observed difference that was statistically significant. Each pair of subscore differences was tested for significance, using the .05 significance level (two-tailed). The direction of the difference was retained. (The size of each pair of subscore differences required for a significant difference appears in Table 1.)

3. A significant and rare difference: An observed difference that was both significant and infrequent. Each pair of subscore differences was appraised for its frequency in the sample. Subscore differences were identified that had a probability of occurrence of .05 or less (using the top and bottom 2.5% of the frequency distribution) and were also significant. The direction of the difference was retained. (The size of each pair of subscore differences required for a significant and rare difference appears in Table 1.)

Two composite measures were also obtained from the discrepancy scores for the three pairs of subscores:

1. The number of significant differences, disregarding the direction of the differences.

2. The number of significant and rare differences, disregarding the direction of the differences.

The following variables were derived for the full subscores and the half subscores:

1. Observed difference for Analytical Reasoning vs. Reading Comprehension.

2. Observed difference for Analytical Reasoning vs. Logical Reasoning.

3. Observed difference for Reading Comprehension vs. Logical Reasoning.

4. Significant difference for Analytical Reasoning vs. Reading Comprehension.

5. Significant difference for Analytical Reasoning vs. Logical Reasoning.

6. Significant difference for Reading Comprehension vs. Logical Reasoning.
7. Number of significant differences.
8. Significant and rare differences for Analytical Reasoning vs. Reading Comprehension.
9. Significant and rare differences for Analytical Reasoning vs. Reading Comprehension.
10. Significant and rare differences for Reading Comprehension vs. Logical Reasoning.
11. Number of significant and rare differences.

Table 1
Size of Significant and Rare Differences in LSAT Subscores

Subscore Pair	Significant Difference	Rare Difference
Analytical Reasoning vs. Reading Comprehension	≥1.27, ≤-1.27	≥1.97, ≤-1.99
Analytical Reasoning vs. Logical Reasoning	≥1.15, ≤-1.15	≥1.75, ≤-1.82
Reading Comprehension vs. Logical Reasoning	≥1.13, ≤-1.13	≥1.36, ≤-1.35

Subgroups

The subgroup variables in the analysis are listed below. They were derived from data on the registration form, answer sheet, and test records. Continuous variables were trichotomized to yield subsamples roughly equal in size.

1. Sex.
2. Age (17-22, 23-26, 27-72).
3. Ethnicity (American Indian, Asian, Black, Canadian Aboriginal and Other, Caucasian, Chicano, Hispanic, and Puerto Rican).
4. English language dominance (English or other).
5. English fluency (fluent or not fluent).
6. LSAT total score (scaled score form; 120-146, 147-154, 155-180).
7. Number of LSATs taken (1, 2, 3-18).
8. LSAT Preparation (any preparation or no preparation).[1]
9. Number of law school applications (1-2, 3-6, 7-129).
10. Selectivity of law schools (median for the mean LSAT scores in 1990-1991 for admitted students in 1990-1991 in each of the law schools to which the examinee is applying; 16-36, 37-38, 39-45).[2]

Analysis

Prevalence analysis. Differences within the various subgroups (e.g., male vs. female) in the frequencies for each of the six categorical discrepancy variables for the full subscores (e.g., significant difference for Analytical Reasoning vs. Reading Comprehension, significant and rare difference for Analytical Reasoning vs. Reading Comprehension) were assessed by χ^2 tests. And differences within the various subgroups in the means for each of the continuous discrepancy variables for the full subscores (e.g., observed difference for Analytical Reasoning vs. Reading Comprehension, number of significant differences, number of significant and rare differences) were assessed by one-way analysis of variance.

Because of the large sample size, both statistical and practical significance were considered in evaluating the results. The .01 level was used throughout in view of the sample size. A minimum effect size was used that accounted for 1% of the variance: a $\underline{w}$ of .10 for χ^2 analyses and an η of .10 for analyses of variance (Cohen, 1988). This size is commonly considered to be a "small" effect from the standpoint of practical significance (Cohen, 1988).

Reliability analysis. The agreement between the categorical discrepancy variable for the corresponding pairs of half subscores (e.g., significant difference for Analytical Reasoning—Half 1 vs. Reading Comprehension—Half 1 with significant difference for Analytical Reasoning—Half 2 vs. Reading Comprehension—Half 2) for the total sample was assessed by the product-moment correlation between the two trichotomous variables. (These variables were dummy coded: The codes for the significant difference variables were +1 = significant—positive, 0 = not significant, and 1 = significant—negative; the codes for the significant and rare difference variables were: +1 = significant and rare—positive, 0 = not significant and rare, and -1 = significant and rare—negative.)

The agreement between the continuous discrepancy variables for the corresponding pairs of half subscores (e.g., observed difference for Analytical Reasoning—Half 1 vs. Reading Comprehension—Half 1 with observed differences for Analytical Reasoning—Half 2 vs. Reading Comprehension—Half 2; number of significant differences—Half 1 with number of significant differences—Half 2) for the total sample was assessed by the product-moment correlation between the two continuous variables.

It should be noted that these analyses yield underestimates of reliability for the categorical discrepancy variables and the composite measures for them because these variables are derived from half subscores, not full subscores. Standard corrections for double length are not applicable, for these adjustments are for continuous scores that are additive, but the present variables use categorizations that are not additive.

Intercorrelation analysis. The product-moment intercorrelations of the categorical discrepancy variables for the full subscores were computed for the total sample. (The variables were dummy coded, with the same codes used in the reliability analysis.) Note that these correlations are inflated because the same subscores are used in different discrepancy variables (e.g., observed difference for Analytical Reasoning vs. Reading Comprehension with observed difference for Analytical Reasoning vs. Logical Reasoning).

Results

Prevalence

Observed differences. The frequency distributions for the three observed difference variables appear in Table 2 and in Figures 1 to 3. All the distributions were symmetrical, with roughly equal numbers of positive and negative score differences. The percentages of subscore differences of one point or more (disregarding the direction of the difference)—a difference of at least one standard score—ranged from 14.7% for Reading Comprehension vs. Logical Reasoning to 31.2% for Analytical Reasoning vs. Reading Comprehension.

The means and standard deviations for these three variables in the subgroups are reported in Table 3, and the analyses of variance for the subgroups are summarized in Table 4. Several differences within subgroups in these variables were significant, statistically ($p < .01$) and practically ($\eta > .10$). All three variables were significant for the LSAT total score. In each case, the observed difference score was larger for the lower-scoring examinees (favoring Analytical Reasoning over Reading Comprehension or Logical Reasoning, and favoring Reading Comprehension over Logical Reasoning).

Two of the variables were significant for age: Analytical Reasoning vs. Reading Comprehension, and Analytical Reasoning vs. Logical Reasoning. In each case, the observed difference score was lower for the older examinees (favoring Reading Comprehension and Logical Reasoning over Analytical Reasoning).

Table 2
Incidence of Observed Differences for Each Pair of LSAT Subscores

	Observed Difference Score	Analytical Reasoning vs. Reading Comprehension (%)	Analytical Reasoning vs. Logical Reasoning (%)	Reading Comprehension vs. Logical Reasoning (%)
+	3.00+	.1	.0	.0
	2.50 - 2.99	.4	.2	.0
	2.00 - 2.49	1.7	1.0	.2
	1.50 - 1.99	4.3	3.5	1.3
	1.00 - 1.49	9.1	8.5	6.0
	.50 - .99	15.3	15.8	15.6
	.01 - .49	18.8	21.5	26.9
−	.00 - .49	19.6	21.2	26.3
	.50 - .99	15.0	14.6	16.3
	1.00 - 1.49	9.1	8.5	5.6
	1.50 - 1.99	4.2	3.6	1.4
	2.00 - 2.49	1.7	1.2	.2
	2.50 - 2.99	.5	.3	.0
	3.00+	.1	.1	.0

Table 3

Means and Standard Deviation of Observed Differences for Each Pair of LSAT Subscores

Subgroup	N	Analytical Reasoning vs. Reading Comprehension Mean	SD	Analytical Reasoning vs. Logical Reasoning Mean	SD	Reading Comprehension vs. Logical Reasoning Mean	SD
			Sex				
Male	21,762	-.04	1.00	-.09	.91	-.05	.70
Female	17,622	.05	.98	.11	.88	.06	.68
			Age				
17 - 22	14,202	.13	.99	.13	.88	.00	.70
23 - 26	11,910	.12	.98	.07	.89	-.04	.69
27 - 72	13,397	-.25	.96	-.21	.89	.04	.68
			Ethnicity				
American Indian	276	-.07	.99	-.01	.93	.06	.72
Asian	2,377	.21	1.03	.28	.90	.07	.70
Black	4,454	.01	.88	.09	.80	.08	.66
Canadian Aboriginal and Other	1,139	-.01	.98	.02	.89	.04	.69
Caucasian	28,503	-.02	1.01	-.05	.92	-.03	.69
Chicano	626	-.05	1.00	.04	.86	.09	.71
Hispanic	1,229	-.01	.94	.10	.86	.11	.66
Puerto Rican	753	.07	.87	.18	.78	.10	.63
			English Language Dominance				
English	35,661	-.01	.99	.00	.90	.00	.69
Other	2,036	.17	.97	.20	.85	.03	.68
			English Fluency				
Fluent	36,671	.00	.99	.00	.90	.00	.69
Not Fluent	348	.29	.93	.35	.78	.05	.66

Table 3 (continued)

Subgroup	N	Analytical Reasoning vs. Reading Comprehension Mean	SD	Analytical Reasoning vs. Logical Reasoning Mean	SD	Reading Comprehension vs. Logical Reasoning Mean	SD
LSAT Total Score							
120 - 146	13,813	.11	.88	.21	.80	.10	.66
147 - 154	13,174	.02	1.06	-.01	.95	-.03	.73
155 - 180	12,543	-.15	1.02	-.23	.90	-.07	.66
Number of LSATs Taken							
1	29,035	-.05	.99	-.05	.90	.00	.69
2	8,675	.13	.99	.12	.91	-.01	.70
3 - 18	1,820	.15	.98	.20	.87	.04	.69
LSAT Preparation							
Preparation	34,668	.01	.99	.01	.90	.00	.69
No Preparation	1,648	-.18	.98	-.15	.90	.04	.67
Number of Law School Applications							
1 - 2	9,617	-.10	.97	-.08	.90	.02	.68
3 - 6	10,063	.00	1.00	.02	.90	.01	.69
7 - 129	8,319	.13	1.00	.08	.90	-.05	.69
Selectivity of Schools							
16 - 36	7,511	.06	.99	.07	.90	.01	.70
37 - 38	8,044	.03	1.01	.02	.91	.00	.70
39 - 45	11,225	-.05	.99	-.06	.89	-.01	.68

Table 4

Analyses of Variance of Subgroup Differences in Observed Differences for Each Pair of LSAT Subscores

		Analytical Reasoning vs. Reading Comprehension			Analytical Reasoning vs. Logical Reasoning			Reading Comprehension vs. Logical Reasoning		
Source	df	Mean Square	F	η	Mean Square	F	η	Mean Square	F	η
					Sex					
Between	1	71.28	72.26**	.04	361.65	449.06**	.11	111.81	236.66**	.08
Within	39,382	.99			.81			.47		
					Age					
Between	2	619.55	647.01**	.18	444.33	560.83**	.17	23.28	49.11**	.05
Within	39,506	.96			.79			.47		
					Ethnicity					
Between	7	17.22	17.47**	.06	46.53	57.68**	.10	14.09	29.81**	.07
Within	34,349	.99			.81			.47		
					English Language Dominance					
Between	1	58.86	59.65**	.04	78.96	97.33**	.05	1.47	3.11	.01
Within	37,695	.99			.81			.47		
					English Fluency					
Between	1	29.21	29.55**	.03	40.68	49.98**	.04	.95	1.99	.01
Within	37,017	.99			.81			.48		
					LSAT Total Score					
Between	2	239.69	245.36**	.11	632.42	807.72**	.20	104.47	222.28**	.11
Within	39,527	.98			.78			.47		
					Number of LSATs Taken					
Between	2	140.62	143.21**	.08	134.69	166.61**	.09	2.42	5.09**	.02
Within	39,527	.98			.81			.48		
					LSAT Preparation					
Between	1	58.70	59.46**	.04	39.10	47.92**	.04	1.98	4.19	.01
Within	36,314	.99			.82			.47		
					Number of Law School Applications					
Between	2	122.64	125.19**	.09	64.45	79.49**	.08	11.29	23.69**	.04
Within	27,996	.98			.81			.48		
					Selectivity of Law Schools					
Between	2	31.93	32.26**	.05	42.49	52.28**	.06	.77	1.61	.01
Within	26,777	.99			.81			.48		

Note. An η of .10 is a "small" effect (Cohen, 1988).
** $p < .01$.

Figure 1
Distribution for Analytical Reasoning vs. Reading Comprehension observed difference score.

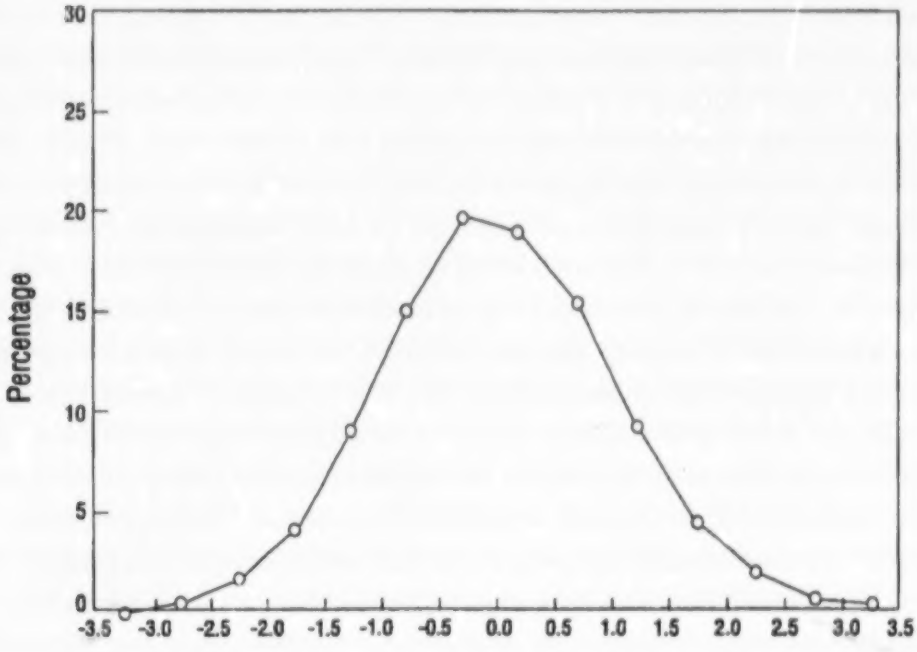


Figure 2
Distribution for Analytical Reasoning vs. Logical Reasoning observed difference score.

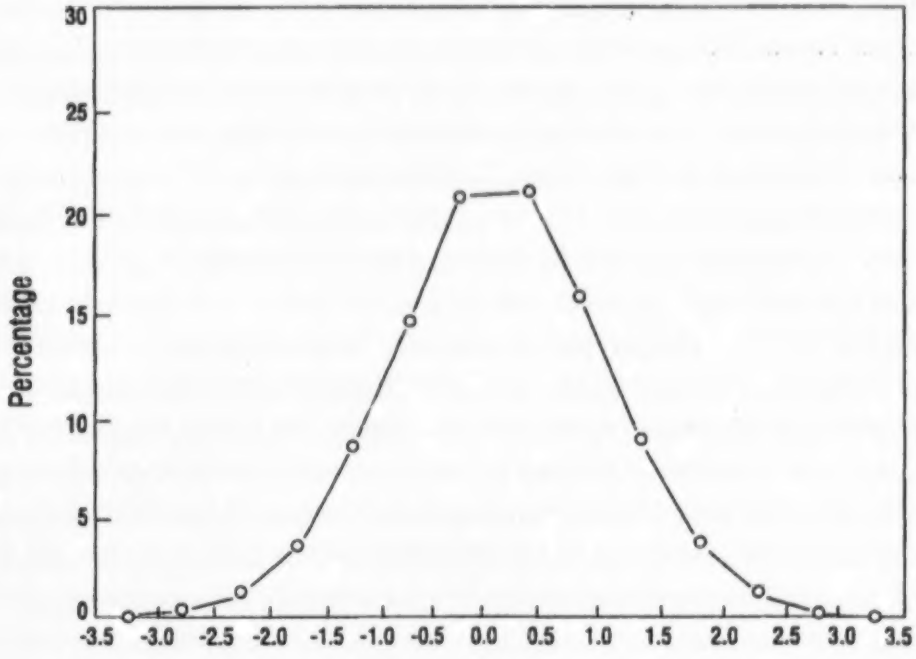
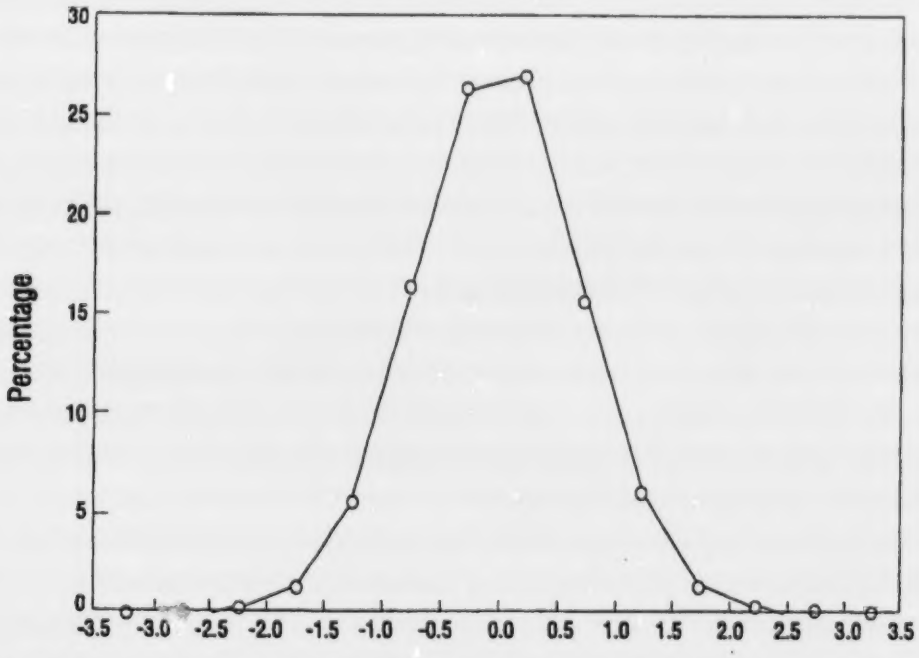


Figure 3

Distribution for Reading Comprehension vs. Logical Reasoning observed difference score.



One variable, Analytical Reasoning vs. Logical Reasoning, was significant for both sex and ethnicity. For sex, the observed difference score was higher for females (favoring Analytical Reasoning), and for ethnicity, the score was higher for Asians.

In brief, observed differences between subscores were substantial. These differences varied with the LSAT total score and, to a lesser extent, with age, sex, and ethnicity. Most of these subgroup relations involved pairs of subscores that included Analytical Reasoning.

Significant differences. The frequencies of a significant difference for each pair of subscores in the total sample are reported in Table 5. The frequency of positive and negative differences was roughly equal. The total number of significant differences (positive or negative) ranged from 10.2% for Reading Comprehension vs. Logical Reasoning to 20.3% for Analytical Reasoning vs. Logical Reasoning. The frequencies for the number of significant differences for the three pairs of subscores in the total sample are reported in Table 6; 34.0% of the sample had one or more significant differences, and the mean was .50 (SD = .76).

The frequencies of a significant difference for each pair of subscores in the subgroups are reported in Table 7, and the χ^2 analyses for the subgroups are summarized in Table 8. Several differences within subgroups in these variables were significant, statistically ($p < .01$) and practically ($w > .10$). Two of the variables were significant for age: Analytical Reasoning vs. Reading Comprehension, and Analytical Reasoning vs. Logical Reasoning. For both variables, the largest discrepancies occurred for older examinees: For Analytical Reasoning vs. Reading Comprehension, fewer positive differences (favoring Analytical Reasoning) and more negative differences; and for Analytical Reasoning vs. Logical Reasoning, more negative differences (favoring Logical Reasoning).

These two variables were also significant for the LSAT total score. For Analytical Reasoning vs. Reading Comprehension, the largest discrepancies involved fewer negative differences (favoring Reading Comprehension) for low-scoring examinees. For Analytical Reasoning vs. Logical Reasoning, the largest discrepancies involved fewer negative differences (favoring Logical Reasoning) for low-scoring examinees and more negative differences for high-scoring examinees.

The mean number of significant differences for the three pairs of subscores for the subgroups are reported in Table 9, and the analyses of variance for the subgroups are summarized in Table 10. Only one of the differences within subgroups for this variable was significant, statistically and practically. For the LSAT total score, the mean for this discrepancy measure was smaller for the low-scoring examinees than for the other examinees.

In short, significant differences on the pairs of subscores were common, affecting about a third of the examinees, especially when the Analytical Reasoning subscore was involved. These differences varied with the LSAT total score and age.

Table 5
Incidence of Significant and Rare Differences for Each Pair of LSAT Subscores

Subscore Pair	Significant Difference		Rare Difference	
	(-%)	(+%)	(-%)	(+%)
Analytical Reasoning vs. Reading Comprehension	9.8	9.8	2.5	2.5
Analytical Reasoning vs. Logical Reasoning	10.3	10.0	2.5	2.5
Reading Comprehension vs. Logical Reasoning	5.1	5.1	.25	2.5

Table 6
Incidence of Significant and Rare Differences for All Pairs of LSAT Subscores

Frequency	Significant Difference (%)	Rare Difference (%)
0	66.1	88.1
1	18.1	8.8
2	15.5	3.1
3	.4	.0

Table 7

Incidence of Significant and Rare Differences for Each Pair of LSAT Subscores for Subgroups

		Significant Difference						Rare Difference					
		AR vs. RC[a]		AR vs. LRb		RC vs. LR[c]		AR vs. RC[a]		AR vs. LR[b]		RC vs. LR[c]	
Subgroup	N	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)
Sex													
Male	21,762	10.7	9.5	12.3	8.7	5.9	4.4	2.8	2.4	3.2	2.2	2.9	2.2
Female	17,622	8.7	10.2	7.8	11.6	4.2	6.0	2.2	2.6	1.6	2.9	2.0	2.9
Age													
17 - 22	14,202	7.6	12.2	7.3	12.3	5.4	5.3	1.8	3.4	1.5	3.5	2.7	2.8
23 - 26	11,910	7.6	11.9	9.0	11.4	5.9	4.4	1.8	2.9	1.9	2.9	3.1	2.2
27 - 72	13,397	14.0	5.3	14.7	6.2	4.1	5.5	3.9	1.2	4.1	1.2	1.8	2.5
Ethnicity													
American Indian	276	12.7	9.4	10.1	10.9	6.2	5.8	2.5	1.4	2.5	1.4	3.6	2.9
Asian	2,377	7.6	14.7	6.2	15.9	4.1	6.3	2.3	3.9	1.1	5.0	2.1	3.0
Black	4,454	7.0	7.4	6.0	8.9	3.2	5.9	1.6	1.4	1.1	1.6	1.3	2.8
Canadian Aboriginal and Other	1,139	9.4	9.4	9.0	10.4	4.6	5.2	2.3	2.5	2.9	2.3	1.8	2.5
Caucasian	28,503	10.5	9.9	11.6	9.6	5.7	4.8	2.8	2.6	2.9	2.5	2.8	2.3
Chicano	626	11.3	8.6	8.5	9.9	3.2	7.4	2.6	2.9	2.1	2.4	1.8	3.7
Hispanic	1,229	8.7	7.2	8.1	11.0	3.4	6.3	2.0	2.2	2.1	3.3	1.5	3.4
Puerto Rican	753	5.0	8.1	4.8	10.1	3.0	4.8	1.2	1.6	1.1	2.0	1.5	2.4
English Language Dominance													
English	35,661	9.9	9.7	10.4	10.0	5.1	5.2	2.5	2.5	2.5	2.5	2.5	2.5
Other	2,036	6.7	12.1	6.1	12.3	4.4	4.8	1.6	3.3	1.1	3.3	2.3	2.8
English Fluency													
Fluent	36,671	9.8	9.9	10.2	10.1	5.1	5.2	2.5	2.5	2.5	2.6	2.5	2.5
Not Fluent	348	3.2	14.1	2.6	12.9	3.7	4.0	1.2	3.4	.3	4.6	2.0	2.6
LSAT Total Score													
120 - 146	13,813	4.9	9.2	4.3	12.2	3.2	6.1	.9	2.3	.5	2.9	1.5	2.8
147 - 154	13,174	11.5	12.6	11.2	11.3	6.5	5.9	2.8	3.3	2.6	3.7	3.2	3.1
155 - 180	12,543	13.3	7.5	16.0	6.2	5.8	3.2	4.0	1.8	4.6	1.0	2.9	1.4
Number of LSATs Taken													
1	29,035	10.6	8.8	11.1	9.0	5.0	5.0	2.8	2.2	2.8	2.2	2.5	2.4
2	8,675	7.5	12.4	8.4	12.6	5.6	5.3	1.8	3.2	1.9	3.5	2.7	2.6
3 - 18	1,820	7.3	12.6	6.4	13.7	4.4	6.0	1.5	3.7	.9	3.5	2.1	3.2

Table 7 (continued)

Subgroup	N	Significant Difference						Rare Difference					
		AR vs. RC[a]		AR vs. LRb		RC vs. LR[c]		AR vs. RC[a]		AR vs. LR[b]		RC vs. LR[c]	
		(-%)	(+%)	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)	(-%)	(+%)
LSAT Preparation													
Yes	1,648	13.4	7.2	14.1	7.3	3.8	5.3	3.9	1.2	2.8	1.8	1.6	2.7
No	34,668	9.5	9.9	10.1	10.2	5.2	5.1	2.5	2.6	2.4	2.6	2.6	2.5
Number of LawSchool Applications													
1 - 2	9,617	11.2	7.1	12.0	8.2	4.7	5.5	3.0	1.5	3.2	1.8	2.3	2.6
3 - 6	10,063	9.9	10.3	9.8	10.3	5.0	5.4	2.6	2.7	2.4	2.6	2.5	2.6
7 - 129	8,319	7.8	12.5	9.1	11.8	6.0	4.5	1.6	3.3	1.7	3.2	2.8	2.2
Selectivity of Law Schools													
16 - 36	7,511	8.4	10.8	8.9	11.3	5.2	5.7	2.1	2.7	2.3	2.9	2.8	2.6
37 - 38	8,044	9.7	10.9	10.0	11.1	5.0	5.3	2.4	2.8	2.2	2.9	2.3	2.7
39 -45	11,225	10.8	8.8	11.7	8.4	5.4	4.7	2.8	2.1	2.7	2.0	2.5	2.2

[a] Analytical Reasoning vs. Reading Comprehension
[b] Analytical Reasoning vs. Logical Reasoning
[c] Reading Comprehension vs. Logical Reasoning

Significant and rare differences. The frequencies of a significant and rare difference for each pair of subscores in the total sample are reported in Table 5; the frequency of positive and negative differences was identical. The total number of significant differences was 5.0% for each pair of subscores. The frequencies for the number of significant and rare differences for the three pairs of subscores in the total sample are reported in Table 6; 11.9% of the sample had one or more significant and rare differences, and the mean was .15 (SD = .44).

The frequencies of a significant and rare difference for each pair of subscores in the subgroups are reported in Table 7, and the χ^2 analyses are summarized in Table 8. Two differences within the subgroups in these variables were significant, statistically and practically. The same variable, Analytical Reasoning vs. Logical Reasoning, was significant for age and the LSAT total score. For age, the largest discrepancy involved more negative differences (favoring Logical Reasoning) for older examinees. For the LSAT total score, the largest discrepancy involved fewer negative differences for low-scoring examinees.

The mean number of significant and rare differences for the three pairs of subscores for the subgroups are reported in Table 9, and the analyses of variance for the subgroups are summarized in Table 10. None of the differences within subgroups was significant, statistically and practically.

In brief, significant and rare differences in the pairs of subscores were uncommon, but about a tenth of the examinees were affected. These differences varied with the LSAT total score and age.

Intercorrelations

Observed differences. In the total sample, the observed difference variable for Analytical Reasoning vs. Reading Comprehension correlated .74, with the corresponding Analytical Reasoning vs. Logical Reasoning variable and -.47 with the Reading Comprehension vs. Logical Reasoning variable, and the Analytical Reasoning vs. Logical Reasoning variable correlated .24 with the Reading Comprehension vs. Logical Reasoning

Table 8

Chi Square Analyses of Subgroup Differences in Significant and Rare Differences for Each Pair of LSAT Subscores

Subscore Pair	Significant Difference		Rare Difference	
	χ^2	w	χ^2	w
		Sex (df=2)		
Analytical Reasoning vs. Reading Comprehension	47.44**	.03	16.12**	.02
Analytical Reasoning vs. Logical Reasoning	266.45**	.08	117.16**	.05
Reading Comprehension vs. Logical Reasoning	106.80**	.05	51.42**	.04
		Age (df=4)		
Analytical Reasoning vs. Reading Comprehension	781.25**	.14	308.36**	.09
Analytical Reasoning vs. Logical Reasoning	699.30**	.13	366.59**	.10
Reading Comprehension vs. Logical Reasoning	64.14**	.04	54.35**	.04
		Ethnicity (df=14)		
Analytical Reasoning vs. Reading Comprehension	204.58**	.07	79.34**	.04
Analytical Reasoning vs. Logical Reasoning	322.57**	.09	165.18**	.06
Reading Comprehension vs. Logical Reasoning	98.60**	.05	69.02**	.04
		English Language Dominance (df=2)		
Analytical Reasoning vs. Reading Comprehension	31.12**	.03	11.50**	.02
Analytical Reasoning vs. Logical Reasoning	46.34**	.04	21.63**	.02
Reading Comprehension vs. Logical Reasoning	2.70	.01	1.39	.01
		English Fluency (df=2)		
Analytical Reasoning vs. Reading Comprehension	21.84**	.02	3.69**	.01
Analytical Reasoning vs. Logical Reasoning	23.50**	.03	12.19**	.02
Reading Comprehension vs. Logical Reasoning	2.44	.01	.38	.00

Table 8 (continued)

Subscore Pair	Significant Difference		Rare Difference	
	χ^2	w	χ^2	w
LSAT Total Score (df=4)				
Analytical Reasoning vs. Reading Comprehension	795.83**	.14	321.09**	.09
Analytical Reasoning vs. Logical Reasoning	1,188.77**	.17	650.81**	.13
Reading Comprehension vs. Logical Reasoning	304.93**	.09	173.45**	.07
Number of LSATs Taken (df=4)				
Analytical Reasoning vs. Reading Comprehension	177.50**	.07	72.34**	.04
Analytical Reasoning vs. Logical Reasoning	191.46**	.07	96.26**	.05
Reading Comprehension vs. Logical Reasoning	11.05	.02	8.24	.01
LSAT Preparation (df=2)				
Analytical Reasoning vs. Reading Comprehension	35.52**	.03	24.93**	.03
Analytical Reasoning vs. Logical Reasoning	37.62**	.03	5.58	.01
Reading Comprehension vs. Logical Reasoning	6.38	.01	6.45	.01
Number of Law School Applications (df=4)				
Analytical Reasoning vs. Reading Comprehension	192.24**	.08	99.37**	.06
Analytical Reasoning vs. Logical Reasoning	104.89**	.06	73.33**	.05
Reading Comprehension vs. Logical Reasoning	26.72**	.03	9.27	.02
Selectivity of Law Schools (df=4)				
Analytical Reasoning vs. Reading Comprehension	56.00**	.05	22.06**	.03
Analytical Reasoning vs. Logical Reasoning	88.61**	.06	27.60**	.03
Reading Comprehension vs. Logical Reasoning	10.12	.02	8.30	.02

Note. A w of .10 of a "small" effect (Cohen, 1988).

** $p < .01$.

Table 9

Means and Standard Deviations of Significant and Rare Differences for all Pairs of LSAT Subscores for Subgroups

Subgroup	N	Significant Difference Mean	Significant Difference SD	Rare Difference Mean	Rare Difference SD
		Sex			
Male	21,762	.51	.77	.16	.44
Female	17,622	.48	.75	.14	.43
		Age			
17 - 22	14,202	.50	.76	.16	.44
23 - 26	11,910	.50	.76	.15	.43
27 - 72	13,397	.50	.76	.15	.43
		Ethnicity			
American Indian	276	.55	.78	.14	.42
Asian	2,377	.55	.78	.17	.47
Black	4,454	.38	.68	.09	.34
Canadian Aboriginal and Other	1,139	.48	.75	.14	.43
Caucasian	28,503	.52	.77	.16	.45
Chicano	626	.49	.76	.15	.44
Hispanic	1,229	.45	.73	.15	.43
Puerto Rican	753	.36	.68	.10	.35
		English Language Dominance			
English	35,661	.50	.76	.15	.44
Other	2,036	.46	.74	.14	.43
		English Fluency			
Fluent	36,671	.50	.76	.15	.44
Not Fluent	348	.41	.75	.14	.43
		LSAT Total Score			
120 - 146	13,813	.40	.69	.11	.37
147 - 154	13,174	.59	.81	.19	.48
155 - 180	12,543	.52	.78	.16	.45
		Number of LSATs Taken			
1	29,035	.50	.76	.15	.43
2	8,675	.52	.77	.16	.44
3 - 18	1,820	.50	.76	.15	.44

Table 9 (continued)

Subgroup	N	Significant Difference Mean	Significant Difference SD	Rare Difference Mean	Rare Difference SD
		LSAT Preparation			
Preparation	34,668	.50	.76	.15	.44
No Preparation	1,648	.51	.75	.14	.41
		Number of Law School Applications			
1 - 2	9,617	.49	.75	.14	.43
3 - 6	10,063	.51	.77	.15	.44
7 - 129	8,319	.52	.77	.15	.43
		Selectivity of Law Schools			
16 - 36	7,511	.50	.76	.15	.44
37 - 38	8,044	.52	.77	.15	.44
39 - 45	11,225	.50	.76	.14	.43

variable. In short, the variables for pairs of subscores that had Analytical Reasoning in common were appreciably related, but the other combinations of variables were minimally associated.

Significant differences. In the total sample, the significant difference variable for Analytical Reasoning vs. Reading Comprehension correlated .51 with the corresponding Analytical Reasoning vs. Logical Reasoning variable and -.27 with the Reading Comprehension vs. Logical Reasoning variable, and the Analytical Reasoning vs. Logical Reasoning variable correlated .13 with the Reading Comprehension vs. Logical Reasoning. Thus all the variables were minimally related, apart from an appreciable association for Analytical Reasoning vs. Reading Comprehension with Analytical Reasoning vs. Logical Reasoning.

Significant and rare differences. In the total sample, the significant and rare difference variable for Analytical Reasoning vs. Reading Comprehension correlated .38 with the corresponding Analytical Reasoning vs. Logical Reasoning variable and .17 with the Reading Comprehension vs. Logical Reasoning variable, and the Analytical Reasoning vs. Logical Reasoning variable correlated .06 with the Reading Comprehension vs. Logical Reasoning variable. Hence, all the variables were minimally related, except for an appreciable association for Analytical Reasoning vs. Reading Comprehension with Analytical Reasoning vs. Logical Reasoning.

Reliability

Observed differences. The correlations between the observed difference variables for the corresponding pairs of half subscores in the total sample were .45 for Analytical Reasoning vs. Reading Comprehension, .46 for Analytical Reasoning vs. Logical Reasoning, and .23 for Reading Comprehension vs. Logical Reasoning. Corrected for double length, the correlations were .62, .63, and .37, respectively. Hence, the reliability was appreciable for two of the three variables.

Significant differences. The correlations between the significant difference variables for the corresponding pairs of half subscores in the total sample were .26 for Analytical Reasoning vs. Reading Comprehension, .25

Table 10

Analyses of Variance of Subgroup Differences in Significant and Rare Differences for All Pairs of LSAT Subscores

Source	df	Significant Difference Mean Square	F	η	Significant Difference Mean Square	F	η
		Sex					
Between	1	8.45	14.54**	.02	1.99	10.46**	.02
Within	39,382	.58			.19		
		Age					
Between	2	.07	.12	.00	.36	1.89	.01
Within	39,506	.58			.19		
		Ethnicity					
Between	7	14.17	24.47**	.07	2.62	13.79**	.05
Within	39,349	.58			.19		
		English Language Dominance					
Between	1	2.95	5.08	.01	.08	.41	.00
Within	37,695	.58			.19		
		English Fluency					
Between	1	3.29	5.65	.01	.03	.17	.00
Within	37,017	.58			.19		
		LSAT Total Score					
Between	2	126.41	219.75**	.10	20.88	108.96**	.07
Within	39,527	.58			.19		
		Number of LSATs Taken					
Between	2	1.72	2.96	.01	.33	1.74	.01
Within	39,527	.58			.19		
		LSAT Preparation					
Between	1	.18	.31	.00	.22	1.16	.01
Within	36,314	.58			.19		
		Number of Law School Applications					
Between	2	1.95	3.35	.02	.24	1.24	.01
Within	27,996	.58			.19		
		Selectivity of Schools					
Between	2	1.13	1.94	.01	.30	1.58	.01
Within	26,777	.58			.19		

Note. An η of .10 is a "small" effect (Cohen, 1988).
** $p < .01$.

for Analytical Reasoning vs. Logical Reasoning, and .09 for Reading Comprehension vs. Logical Reasoning. The correlation between the number of significant differences for the corresponding pairs of half subscores was .17 for the total sample. Thus, the reliability was minimal for all the variables.

Significant and rare differences. The correlations between the significant and rare difference variables for the corresponding pairs of half subscores in the total sample were .16 for Analytical Reasoning vs. Reading Comprehension, .17 for Analytical Reasoning vs. Logical Reasoning, and .07 for Reading Comprehension vs. Logical Reasoning. The correlation between the number of significant and rare differences for the corresponding pairs of half subscores was .13 in the total sample. In short, the reliability was minimal for all the variables.

Discussion

A central finding is that subscore differences on the LSAT, often very substantial ones, were frequent. Statistically significant subscore differences were also very common, affecting about a third of the examinees. Substantively, this finding suggests that real differences exist in these examinees' performance on the LSAT subtests, reflecting variation in their development of the abilities tapped by the subtests. A similar phenomenon has been repeatedly observed in intelligence tests (Chatman, Reynolds, & Willson, 1984; Kaufman, 1976a, 1976b; Matarazzo, Daniel, Prifitera, & Herman, 1988; Matarazzo & Herman, 1985; McLean, Kaufman, & Reynolds, 1989; Rosenthal & Kemphaus, 1988). For example, 37.8% of the standardization sample for the WAIS-R (1,880 late adolescents and adults) had a significant difference (.05 level, two-tail) of 10 IQ points between their Verbal and Performance IQs (Matarazzo & Herman, 1985). The ubiquity of such discrepancies has led to the suggestion that differences in how people manifest intelligence are the norm rather than the exception (Kaufman, 1990).

Statistically significant but rare differences were necessarily less common, but affected over a tenth of the examinees. These differences have the greatest potential importance because of their infrequency, for they represent real and highly unusual differences in examinees' patterns of abilities.

A related finding of some interest is that these trends in prevalence generally did not vary with the examinees' sex, ethnicity, familiarity with the LSAT, or the number or selectivity of the law schools to which the examinees were applying. This absence of associations between subscore discrepancies and sex and ethnicity is paralleled by generally similar findings for intelligence tests (Chatman et al., 1984; Kaufman, 1976a, 1976b; Matarazzo, Bornstein, McDermott, & Noonan, 1986; Matarazzo et al., 1988; McLean et al., 1989).

The connections that emerged between subscore discrepancies and the LSAT total score and age primarily reflected the deviantly poor performance on the Analytical Reasoning subtest by examinees who had higher total scores on the test or were older.

The greater discrepancies for high scorers accords with the intelligence test research, which consistently finds the highest incidence of subscore discrepancies for such examinees (Kaufman, 1976a, 1976b; Matarazzo & Herman, 1985; Matarazzo et al., 1988; Matarazzo & Prifitera, 1989; McLean et al., 1989). For instance, in the WAIS-R standardization sample, 47.5% of examinees with a full-scale IQ of 120 and above had a significant difference of 10 points in their Verbal and Performance IQs, in contrast to 37.8% of the total sample (Matarazzo & Herman, 1985). This association has been interpreted as a manifestation of greater differentation of abilities for the most intelligent individuals (Matarazzo et al., 1988).

The greater discrepancies for older examinees disagrees with the research on intelligence tests, which generally finds no association between age and subscore differences (Chatman et al., 1984; Kaufman, 1976b; Matarazzo & Herman, 1985; Matarazzo et al., 1988; McLean et al., 1989). This inconsistency may be attributable to the self-selected character of the LSAT examinee population that produces systematic differences in the backgrounds and experiences of older and younger test takers not found in the representative cross-sections of the general population used in the intelligence test work. Follow-up research into the link between

age and performance on the Analytical Reasoning subtest might be informative, along the lines of previous studies of gender and ethnic group differences in the validity of the test's items and scores (Wightman & Muller, 1990a, 1990b).

Subscore differences are an inevitable consequence when the subtest scores are not perfectly correlated (Cahan & Cohen, 1988; Matarazzo, 1972; Matarazzo & Herman, 1985). In fact, significant (and significant and rare) differences were most prevalent in this study for pairs of subscores that included Analytical Reasoning, and this subtest had substantially lower correlations with the other subtests (r = .51 with Reading Comprehension and r = .59 with Logical Reasoning vs. r = .76 between Reading Comprehension and Logical Reasoning in the total sample). This same differentiation between the Analytical Reasoning subtest and the other subtests was also observed in a factor analytic study of the previous version of the LSAT (Camilli, Wang, & Fesq, 1992). Two factors were identified, one defined by Analytical Reasoning items, and the other by Reading Comprehension and Logical Reasoning items.

Any operational use of these discrepancy variables hinges on their reliability. Two of the three observed difference measures had appreciable reliability (Reading Comprehension vs. Logical Reasoning was an exception), about .6, similar to the reliability of observed difference measures for intelligence tests (Feingold, 1984; McNemar, 1957). For example, on the WAIS-R, the average reliabilities were .81 for the difference between Verbal and Performance IQs and .65 for the difference between subtest scores (Feingold, 1984).

But the reliability was minimal for all of the more important discrepancy measures for significant or significant and rare differences, even taking into account the lower-bound nature of these reliability estimates. The unreliability of these measures clearly precludes their use in interpreting the test performance of individual examinees. Parallel data are unavailable on the reliability of these measures for intelligence tests, but it seems highly likely that their reliability is equally low. Indeed, a study of a somewhat similar measure for the WAIS-R (number of subtest scores significantly different from the examinee's mean subtest score) found its reliability was only .28 (Matarazzo et al., 1988).

The minimal reliability of these two kinds of discrepancy measures may, of course, contribute to their sparse associations with the subgroup variables. However, the much more reliable observed difference measures were also generally unrelated to the subgroup variables, suggesting that this absence of differences in prevalence within subgroups is an inherent feature of all these measures.

Although subscore discrepancies appear to have no viable role to play in interpreting examinees' LSAT performance, the distinct possibility remains that other approaches which capitalize on the test's multidimensionality, such as using the subscores in prediction systems (Camilli et al., 1992), may yet prove to be useful. The potential value of the LSAT's multidimensionality merits serious attention.

References

Boldt, R. F. (1966). Predicting law school achievement with discrepant predictor scores (LSAC Research Report 66-1). Princeton, NJ: Law School Admission Council.

Boldt, R. F. (1968). Extension of the discrepant predictor study—Final report (LSAC Research Report 68-1). Princeton, NJ: Law School Admission Council.

Cahan, S., & Cohen, N. (1988). Significance testing of subtest score differences: The case of nonsignificant results. Journal of Psychoeducational Assessment, 6, 107-117.

Camilli, G., Wang, M-m., & Fesq, J. (1992). The effects of dimensionality on true score tables for the Law School Admission Test (LSAC Statistical Report 92-01). Newtown, PA: Law School Admission Services.

Chatman, S. P., Reynolds, C. R., & Willson, V. L. (1984). Multiple indexes of test scatter on the Kaufman Assessment Battery for Children. Journal of Learning Disabilities, 17, 523-531.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum.

Conrad, D., Trisman, D., & Miller, R. (1977). Graduate Record Examinations technical manual. Princeton, NJ: Educational Testing Service.

Feingold, A. (1984). The reliability of score differences on the WAIS,

WISC-R, and WAIS-R. Journal of Clinical Psychology, 40, 1060-1063.

Frank, G. (1983). The Wechsler enterprise. Oxford, England: Pergamon.

Hecht, L. W., & Schrader, W. B. (1986). Graduate Management Admission Test. technical report on test development and score interpretation for GMAT users. Princeton, NJ: Graduate Management Admission Council.

Kaufman, A. S. (1976a). A new approach to the interpretation of test scatter on the WISC-R. Journal of Learning Disabilities, 9, 33-41.

Kaufman, A. S. (1976b). Verbal-Performance IQ discrepancies on the WISC-R. Journal of Consulting and Clinical Psychology, 44, 739-744.

Kaufman, A. S. (1979). Intelligent testing with the WISC-R. New York: Wiley.

Kaufman, A. S. (1990). Assessing adolescent and adult intelligence. Boston: Allyn and Bacon.

Matarazzo, J. D. (1972). Wechsler's measurement and appraisal of adult intelligence (5th ed.). Baltimore, MD: Williams & Wilkins.

Matarazzo, J. D., Bornstein, R. A., McDermott, P. A., & Noonan, J. V. (1986). Verbal IQ vs. Performance IQ difference scores in males and females from the WAIS-R standardization sample. Journal of Clinical Psychology, 42, 965-974.

Matarazzo, J. D., Daniel, M. H., Prifitera, A., & Herman, D. O. (1988). Inter-subtest scatter in the WAIS-R standardization sample. Journal of Clinical Psychology, 44, 940-950.

Matarazzo, J. D., & Herman, D. O. (1985). Clinical uses of the WAIS-R: Base rates of differences between VIQ and PIQ in the WAIS-R standardization sample. In B. B. Wolman (Ed.), Handbook of intelligence (pp. 899-932). New York: Wiley.

Matarazzo, J. D., & Prifitera, A. (1989). Subtest scatter and premorbid intelligence: Lessons for the WAIS-R standardization sample. Psychological Assessment: A Journal of Consulting and Clinical Psychology, 1, 186-191.

McLean, J. E., Kaufman, A. S., & Reynolds, C. R. (1989). Base rates of WAIS-R subtest scatter as a guide for clinical and neuropsychological assessment. Journal of Clinical Psychology, 45, 919-926.

McNemar, Q. (1957). On WAIS difference scores. Journal of Consulting Psychology, 21, 239-240.

Rosenthal, B. L., & Kemphaus, R. W. (1988). Interpretive tables for test scatter on the Stanford-Binet Intelligence Scale: Fourth Edition. Journal of Psychoeducational Assessment, 6, 359-370.

Sattler, J. M. (1988). Assessment of children's intelligence and special abilities (3rd ed.). San Diego, CA: Author.

Thorndike, R. L., Hagen, E. P., & Sattler, J. M. (1986). The Stanford-Binet Intelligence Scale: Fourth Edition, technical manual. Chicago: Riverside.

Wechsler, D. (1974). Manual for the Wechsler Intelligence Scale for Children—Revised. New York: Psychological Corporation.

Wechsler, D. (1981). WAIS-R manual, Wechsler Adult Intelligence Scale—Revised. Cleveland, OH: Psychological Corporation.

Wightman, L. F., & Muller, D. G. (1990a). An analysis of differential validity and differential prediction for Black, Mexican American, Hispanic, and White law school students (LSAC Research Report 90-03). Newtown, PA: Law School Admission Services.

Wightman, L. F., & Muller, D. G. (1990b). Comparison of LSAT performance among selected subgroups (LSAC Research Report 90-01). Newtown, PA: Law School Admission Services.

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Endnotes

1 "Any preparation" consisted of any of the following responses: Studying the same questions in the Law Services Information Book; taking the sample test in the Law Services Information Book; working through The Official LSAT PrepTest(s), The Official LSAT PrepBook, or The Official LSAT PrepKit; using a book on how to prepare for the LSAT not published by Law Services; attending a commercial test preparation or coaching course; attending a test preparation or coaching course offered through an undergraduate institution; self-study; and other preparation.

2 Data for this variable were only available for examinees applying to 20 or fewer law schools.

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